Evaluation Statement

Position Description
For
Engineer, GS-0801-11
(Construction Management Branch)

Labor Category/FLSA: E

_____Current or__X__ Proposed Specific Description

Date Prepared: July 7, 2003

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Title: HR Specialist

Standard Used: PCS for Engineering Group, GS-800, dated 3/90 and Industrial Engineering Series, GS-0896, dated 1/75.

Position Title/Series/Grade: Engineer, GS-801-11

The proposed title, series and grade for the position is General Engineer, GS-0801-11. The position is properly classified in the Engineering Group, GS-0800. This standard covers "all classes of positions the duties of which are to advise on, administer, supervise, or perform professional, scientific or technical work in engineering research, in the investigation or development of engineering projects, or in the development, design, construction, inspection, production, application, standardization, test, operation or maintenance of engineering facilities".

The series definition adequately describes the position under evaluation, since the duties and responsibilities involve all aspects of coordinating projects once the planning stage is complete. This duties and responsibilities requires the professional expertise of an Engineer who has the ability to: 1) review the scope of work for A/E services to assure accuracy and completeness; 2) prepare Request for Proposals (RFPs) to be forwarded to the contractors; 3) review of contractors' proposals to assure completeness and accuracy; 4) review of quality control plans for A/E and construction contractors; 5) coordinate projects with NIH reviewing officials such as Division of Safety, Facilities Operations Branch, Fire Protection Section, 6) assemble project reports such as EVA (earned value analysis) for use of Government Representative, etc.

The titling practices are not specifically addressed in the standard; however, the basic principles for titling positions are implied, based on information derived from the U.S. OPM "Introduction to the Position Classification Standards". The standard states that, the series assigned to a position is represented by the "primary work of the position, the highest level of work performed, and the paramount qualifications" required to perform the duties of the position". In this case, the primary work of the position is that of Engineer, whose primary responsibilities are to coordinate every aspect (from design to completion of construction) of construction and renovation projects at NIH. This level of responsibility requires expertise in the field of engineering.

The title of "Engineer" requires practical application of basic scientific principles, fundamental engineering concepts and terminology, the units of measurement, and their interrelationship throughout all branches of engineering and a thorough understanding of engineering techniques and methods gained from four (4) years of engineering training from an accredited college or university. These requirements are critical to the successful performance of the subject position, thus the title of "Engineer" is appropriate.

The Industrial Engineering Series was used to evaluate the nature and variety of work, nature of available guidelines used to perform the work, nature of supervisory control exercised over the work, mental demands, purpose and nature of person-to-person work relationships, nature and scope of recommendations, decisions, commitments and conclusions made to ensure that the level work, professional knowledge, abilities and qualifications are consistent with the requirements of the standard.

As mentioned previously, the position is being evaluated based on the PCS for Industrial Engineering Series, GS-0896. The criteria used in the evaluation are: 1) nature and variety of work; 2) nature of available guidelines for performance of work; 3) nature of supervisory control exercised over the work; 4) mental demands; 5) purpose and nature of person-to-person work relationships; and 6) nature and scope of recommendations, decisions, commitments and conclusions.

Nature and variety of work. The position is comparable to the description of the GS-11 level of this factor. At this level, the Engineers plan and complete projects or assignments of a conventional nature. The incumbent independently adapts background data and information and its interpretation using precedents. Assignments are established engineering practices, which requires significant adaptation and modification of guidelines. The GS-11 level for this factor is assigned.

Nature of available guidelines for performance of the work. The guidelines used by lower graded engineers are also used by GS-11, but less likely to apply to problems encountered. Engineers at this level are expected to interpret guides and select and apply the most appropriate precedents. He/She is expected to adapt precedents and draw on their own experience when situations are encountered and not addressed in the guide(s). Assigned GS-11 level for this factor.

Nature of supervisory control exercised over the work. The assignment of GS-11 is appropriate for this factor. At this level, the supervisor indicates the major objectives of the assignments, providing background information and pertinent data that may be unusual to the assignment(s) and suggest ways of overcoming the problems. The incumbent is allowed considerable independence in planning and carrying out assignments at this level. GS-11 level assigned to this factor.

Mental Demands. At the GS-11 level, Engineers are expected to plan and accomplish the engineering activities independently. Sound judgment and creative thinking is critical at this level. The assignment of GS-11 is appropriate for this factor.

Purpose and nature of person-to-person work relationships. GS-11 is appropriate for this factor, since the position requires that contacts are with a variety of individuals and the scope at this level is more extensive than at the lower grade levels.

Nature and scope of recommendations, decisions, commitments, and conclusions. The position meets the GS-11 level for this factor. In addition to the decisions, recommendations and conclusions made at the GS-9 level, the incumbent has responsibility for interpreting guidelines, adapting established procedures and techniques, and making engineering deviations in planning and accomplishing the broader engineering assignments that are typical at this level. The GS-11 level is appropriate at this level.

Conclusion: Engineer, GS-801-11

General Engineer (Planning, Project Officer)
GS-801-11

Introductory Statement:

The Division of Property Management (DPM) serves all of the NIH Community by providing support for renovations, new construction and maintenance of existing facilities, utilities and grounds. The Division provides professional leadership for the engineering programs of the Department of Health and Human Services, National Institutes of Health (NIH). The scope of DPM operations is such that the effectiveness with which they are carried out has a major and direct effect on the worldwide biomedical research programs of the NIH. In addition to the main facilities at the Bethesda Campus and in Poolesville, MD, NIH has facilities at Research Triangle Park, North Carolina, Rocky Mountain Laboratory in Montana and the Gerontology Research Center in Baltimore, MD.

This position is organizationally located within the DPM and is responsible for the direction and implementation of all activities related to facilities operations and maintenance of NIH facilities that are the responsibility of the Most Efficient Organization (MEO) as determined by ORF/DPM management as part of the A-76 process.

I. MAJOR DUTIES AND RESPONSIBILITIES

The incumbent serves as General Engineer for the Construction Management Branch (CMB), DPM. The incumbent is responsible for all aspects of coordinating the projects once their planning stage is completed and the IC customer has provided funding through work request, to their completion.

Activities include:

- Review scopes of work for A/E services as prepared by Government Representative and assure their completeness and as appropriate contact IC customer or Building Management Section to clarify scope.
- Preparation of RFP to be forwarded to the contractors
- Review of contractors' proposals (A/E's and construction contractors) to assure their completeness and accuracy.
- Review quality control plans for A/E and construction contractors and assure they are complete and accurate.
- Coordinate site utilization with Government representative.
- Coordinate the project with NIH reviewing officials such as Division of Safety, Facilities Operations Branch, Fire Protection Section, etc.
- Review A/E and construction contractor's schedule and evaluate their completeness and constructability.
- Prepare Fee For Service cost estimates for each project

- Assemble project reports such as EVA (earned value analysis) for the Government representative use. If there are deviations that need corrective action, assure the proposed actions are reasonable and achievable.
- Assure waiver requests from contractors are submitted in a timely fashion and tracked properly to avoid delays to the project.
- Furnish expert technical advice to other staff as directed.
- Prepare project plans and budgetary cost estimates

Factor 1 - Knowledge Required

- Incumbent processes the technical ability to analyze cost estimates made by A/E firms; prepares technical reports and papers on issues relating to contractors' performance.
- Coordinates with NIH environmental engineers, industrial hygienists, and safety specialists to ensure that all environmental and safety interests are considered; consulting with research personnel and other advisory groups such as the Environmental Safety Branch (ESB) and the Occupational Safety and Health Branch (OSHB).
- Ensures that the finished product (i.e., design, and construction) meets the needs of the NIH. Strict adherence by the incumbent to the requirements of the CMB Quality System Manual (QSM) is essential. Incumbent must perform all work in compliance with the CMB QSM strictly following its policies, procedures, and requirements concerning procedural documentation and internal and external audits.
- Conceptualizes and formulates projects by surveying existing site conditions to correctly assess space requirements and properly coordinate these requirements with the building systems through applying sound engineering practices. When renovating existing space, coordinates the elements of program need and time urgency with the constraints of space, service, and funding; and manages the project throughout the design phase to produce a set of drawings and specifications complete for on-site construction. Prepares and critiques time sequencing schedules, including those generated by computer program, as well as budget cost estimates of the elements of construction in the project
- Furnishes expert technical advice based on his/her knowledge of the rudiments of contract law, Federal procurement policies and procedures, and financial management.

- Exhibits knowledge of construction contract law, Federal procurement policies and procedures, and financial management.

Factor 2 - Supervisory Controls

Supervision is essentially administrative in nature with assignments made in the form of a designated project for which the scope must be developed, designed, and construction contract administered by the Program Manager. The incumbent plans for and carries out

projects with authority to act on own initiative on matters affecting the project's design. Master plans, deviation from agency policies, schedule changes, budget changes, and changes or actions that degrade the objective performance or alter operational characteristics of the project are submitted for final sign-off for the supervisor together with recommended courses of action, including available alternatives. The incumbent keeps the supervisor informed of progress on potentially controversial matters that he/she identifies by an ongoing project analysis or issues with far-reaching implications. Otherwise, actions, decisions, and commitments are considered technically authoritative and are accepted without change. The supervisor, however, is available for consultation on policy matters.

Factor 3 - Guidelines

In addition to standard engineering references, guidelines are broadly stated agency regulations and policy statements. Much of the work involves policy matters or deals with coordination of programs or projects for the design and construction of biomedical research facilities, and Federal budget and procurement policies as they apply to A/E and construction procurement are of primary concern. Personnel policy and regulations are also of routine and necessary concern for the accomplishment of program objectives. The incumbent must exercise considerable judgment and ingenuity in interpreting or adapting guidelines that do exist and developing new approaches when required. Additionally, as a recognized authority, the incumbent must exercise considerable judgment and ingenuity in interpreting existing guidelines and policies and developing new approaches when required. Additionally, as a recognized authority, the incumbent develops instructions, guidelines, and directives for NIH application.

Factor 4 - Complexity

The assignments extend in varied situations into design, scheduling and construction phases. Where significant costs or energy are involved or where poor design would cause serious disruption to the planned research programs. There are often urgent assignments involving public exigency (e.g., rodent swine-flu virus development, AIDS research programs, etc.).

Factor 5 - Scope and Effect

The purpose of the work is to provide direction and expert technical advice to all major design projects planned for the NIH and its field stations. Projects for which the employee makes decisions are most often valued in the multimillion dollar range. Reliability in performance of support systems in medical research facilities and hospitals is of utmost importance; the employee has significant impact on the important medical research efforts carried on by NIH and its field stations and often sets the trend for future construction criteria at these facilities.

Factor 6 - Personal Contacts

Contacts are with private architect/engineers, engineers with other Federal government agencies and private firms, NIH administrative research personnel, engineers and industrial hygienists with other peer groups at NIH, other DPM engineers, contractor and manufacturers' representatives.

Factor 7 - Purpose of Contacts

Contacts private architect/engineers, to exchange information, coordinate work efforts, furnish technical advice, resolve controversial issues. Contacts engineers in other agencies and firms to coordinate and develop consistent policies and design approaches. Contacts NIH administrative and research personnel to determine scopes of work. Contacts peer group personnel to solicit advice on safety issues. Contacts other DPM engineers (maintenance engineers, construction engineers) to determine mechanical equipment maintenance needs and to resolve field problems that conflict with design. Contacts manufacturer's representatives to obtain information on latest products. The contract is a medium used by the mechanical engineer to act as liaison between the Federal government and contract engineers and to negotiate design modifications.

Factor 8 - Physical Demands

The work is usually sedentary and performed in an office environment, although travel to field installations involves a considerable amount of walking, climbing, and other forms of physical exertion associated with program evaluation activities.

Factor 9 - Work Environment

Work is normally performed in an office setting with some site visits to the laboratory and animal areas where bio-hazard exposure is common and some visits to mechanical equipment rooms and power plants where exposure to noise, high voltage and moving parts is common.